

Remarks

Claims 1-19 were pending and were under consideration.

Claims 2, 5-7 and 19 are canceled.

Claims 1, 8, 13, 14, 17 and 18 are amended.

Claim 20 is added.

Claims 1, 3, 4, 8-18 and 20 are now pending.

Claim 1 is amended to incorporate the limitations of claims 2 and 7 regarding definition of the filler and the non-ionic surfactant. The non-ionic surfactant of formula (I) is not included.

Claim 1 is also amended to require that the filler is not an organically modified clay. As discussed in the specification, page 1, second and third paragraphs, and page 3, second full paragraph, organically modified clays are clays modified with alkyl or dialkyl ammonium ions or amines.

Claim 8 is amended to depend on claim 1.

Claim 13 is amended to be consistent with claim 1 and to be more clear.

Claim 14 is amended to be more clear.

Claim 17 is amended to be consistent with claim 1.

Claim 18 is amended to be more clear.

New claim 20 finds support in the first paragraph of page 13 and item 11. on page 22 of the disclosure.

No new matter is added.

Claim 5 is objected to. Claim 5 is deleted.

Claims 13 and 14 are objected to for reasons of record. These claims are repaired by amendment as requested.

Claim 19 is rejected under 35 USC 112, second paragraph.

Claim 19 is deleted.

Claims 1-7, 9-14, 16, 18 and 19 are rejected under 35 USC 102(e) as being anticipated by Dontula, et al., U.S. Pat. No. 6,841,226.

Claims 12 and 13 are rejected under 35 USC 103(a) as being unpatentable over Dontula in view of Mehta, et al., U.S. Pat. No. 6,844,389.

Claim 15 is rejected under 35 USC 103(a) as being unpatentable over Dontula in view of Mehta.

Dontula teaches the use of ethoxylated alcohols as non-ionic surfactants for use as clay intercalating agents. The intercalated clay product is recommended for addition to a polymer, col. 3, lines 19-37. Claim 2 of the patent is aimed at an imaging layer containing ethoxylated alcohol, smectite clay and a polyolefin.

Dontula's general description recommends use of ethoxylated alcohols derived from "very long chain linear synthetic alcohols" of chain lengths C_{12} - C_{106} or C_{26} - C_{50} (col. 5, lines 54-62), "ethoxylated wax 1144" or "ethoxylated wax 1139" from Baker Petrolite is used in the Examples. No further details are disclosed.

The present invention is aimed at a process for the preparation of a polyolefin nanocomposite, which process comprises melt mixing a) polyolefin, b) a specific filler and c) a surfactant selected from sorbitan esters, dimethylsiloxane-ethylene oxide block copolymers and poly(methyl methacrylate)-block-poly(oxyethylene) copolymers. Compounds of formula (I) are no longer present.

Applicants submit that there is no overlap of the ethoxylated alcohols of Dontula with the surfactants of present component c).

In view of the present amendments and these remarks, Applicants submit that the 35 USC 102(e) and 35 USC 103(a) rejections involving Dontula are addressed and are overcome.

Claims 1-5, 7, 8-14 and 16-19 are rejected under 35 USC 102(e) as being anticipated by Rosenthal, et al., U.S. Pat. No. 6,864,308.

Claim 15 is rejected under 35 USC 103(a) as being anticipated by Rosenthal in view of Mehta.

In contrast to the present invention, where the filler is selected from natural or synthetic phyllosilicates or hydroxycarbonates, which are not organically modified, Rosenthal generally uses cationically modified organoclays, except for sample 2 of Example 6. This Example compares composites containing ammonium modified clay with those containing an unmodified montmorillonite, using ethylene-bis-stearamide as intercalating agent/surfactant and polypropylene as the polymer matrix. This comparison shows that the nanocomposites obtained with the unmodified clay contain "a poorer dispersion of the untreated clay", col. 9, line 62. The Example thus appears to lead away from the present invention. Clearly, the skilled artisan would not be motivated to combine other intercalating agents used by Rosenthal, such as sorbitan monostearate of Example 4, with an unmodified clay.

In view of the present amendments and these remarks, Applicants submit that the 35 USC 102(e) and 35 USC 103(a) rejections involving Rosenthal are addressed and are overcome.

Claims 1, 5-14 and 16-19 are rejected under 35 USC 102(b) as being anticipated by Whitehouse, et al., U.S. Pat. No. 6,268,407.

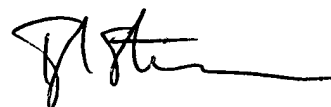
In view of the present amendments, Applicants submit that these claims are addressed and are overcome.

In view of the present amendments and the above remarks, Applicants submit that each of the claim objections and rejections are addressed and are overcome.

The Examiner is kindly requested to reconsider and to withdraw the present rejections.

Applicants submit that the present claims are in condition for allowance and respectfully request that they be found allowable.

Respectfully submitted,



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Attachment: Petition for a two month extension of time